

# **;login:**

## THE UNIX NEWSLETTER

Volume 5 Number 6

August 1980

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New ;login: Editor

This issue of ;login: is the first under a new production and editorial arrangement developed at the Delaware Usenix Association meeting in June of this year. Under this arrangement the University of Texas at Austin Computation Center will assume responsibility for the editorial and production requirements of the Newsletter. Wally Wedel of the Computation Center will undertake the editorial duties.

At the Delaware meeting we had announced plans to issue a Newsletter as early as mid July. Those plans failed to materialize because of the difficulty of making the necessary arrangements during the summer in a large University environment. By the time you read this a proposed agreement between the University of Texas Computation Center and the Usenix Association should be in the mail to the Usenix Board of Directors.

We expect to be issuing ;login: on a monthly basis from now on.

Newsletter deadlines

Final copy for the newsletter will go to the printer on the first Wednesday of each month. The deadline for submittal of articles, announcements and letters will be the last Wednesday of the month.

Guidelines for Submission of Newsletter Material

I would like to use the modern text preparation and communications facilities of UNIX to as great an extent as feasible in the preparation of the Newsletter. I have established an account on our PWB/UNIX system so that those who can provide us with machine manageable material can do so. The telephone number is (512) 474-5511. The login name is login and the password is usenix. (The system is also host utexas on the ARPANET.)

For those submitting paper copy of material, please produce your copy on a daisy wheel printer or similar high quality printing device. Line printer produced copy is typically not adequate for reproduction. Copy should be on 8 1/2" by 11" paper with a 1" margin on left, right, and bottom and 1 1/2" margin on top.

U. S. Mail submissions should be addressed to:

Login Newsletter  
Computation Center  
The University of Texas  
Austin, Tx 78712

Attn: Wally Wedel

Meeting Announcement

The next USENIX meeting is scheduled for San Francisco, California, January 21-23, 1981. Tom Ferrin at the University of California, San Francisco will be hosting the meeting. Tom's mailing address is:

Room 1022C, Medical Sciences Building  
UCSF  
San Francisco, CA 94143

Details on accommodations, chairpersons, etc., will follow in the next newsletter.

Beginning with the January meeting, it will be necessary for interested parties to submit abstracts of any proposed presentations. Hopefully, this will facilitate acceptable grouping of the talks. If you are planning to make a presentation at San Francisco, forward an abstract to Tom Ferrin.

An open invitation is issued to anyone interested in hosting future USENIX meetings. Meeting guidelines regarding frequency, format, content, etc., are currently being formulated by a committee. Any response about hosting a meeting or making suggestions for future meetings should be directed to:

John L. Donnelly  
NCAR  
P.O. Box 3000  
Boulder, Colorado 80307  
(303) 494-5151 (ext. 527, 534)

Editorial

## The Newsletter

The UNIX Newsletter ;login: is being revived! I have agreed to serve as editor until the Board of Directors chooses to pass these duties to someone else. As I stated at the Delaware Usenix meeting, my model for a newsletter such as this is the Pascal Newsletter. Andy Mickel of University of Minnesota, with the enthusiastic support of Pascal Users around the world made the Pascal Newsletter a vital force in bringing Pascal into widespread acceptance in the computing community. I hope we can do many of the same kinds of things for UNIX and C based programming systems. Much of the vitality of this Newsletter will depend on contributions of material from the UNIX user community. Types of material which are appropriate include:

- 1) articles describing systems and programs developed using UNIX or C.
- 2) review of experience with UNIX or C based programming systems with ideas for improvements and reports of errors or misfeatures.
- 3) letters to the editor commenting on UNIX issues, USENIX issues, or broader general computing issues which may be of interest to UNIX or C users.
- 4) description of new documents for UNIX and C related systems.
- 5) new developments in software tools.
- 6) USENIX business.

Depending on the amount of material received for the Newsletter, I plan to organize the Newsletter into departments roughly along the lines of the items in the above list. Other departments will be created as required.

## Association Matters

Many of us who have joined the Association are dubious about its future viability based largely on the problems which have been encountered over the last couple of years in producing newsletters and distribution tapes. Concern over these problems led me as a newly elected director to agree to develop a solution to the newsletter problem. I hope and expect to provide a satisfactory solution. Distribution tapes continue to be a problem. I for one am not yet satisfied that progress is being made in this area. I hope to have a newsletter article this fall on the status of this program.

To those of us who have experienced the frustrations of running a Usenix meeting it has appeared that the Association has provided far

too little support in the area of meeting planning and preparation. Board member John Donnelly is investigating this problem and hopefully will be able to provide some suggestions for effective assistance to meeting organizers.

Two issues surfaced at the Delaware Meeting which clearly need further discussion and clarifying actions by the Board of Directors. The first issue is the question of whether employment recruiting should be permitted at Association meetings and if it is permitted what policies or rules might be established to control recruiting activities. As the situation now stands all recruiting is prohibited by action of the Board. The second issue is the question of vendor related activities at Usenix meetings and in this Newsletter. I encourage you to express your ideas on these matters in letters to the editor for future editions of ;login:.

Letter to the Editor

Date: 21 Jul 1980 1001-PDT  
From: Mo at LBL-Unix (Mike O'Dell)  
Subject: Letter to the Editor (Usenix Newsletter)  
To: wedel at utexas  
Cc: mo, scherrer

Wally,

First, let me post the usual disclaimer that what I am about to say is my personal opinion and in no way reflects the views or anything else of my current employer (Lawrence Berkeley Laboratory) or the Department of Energy.

While on the whole, the Delaware Usenix meeting was a good conference (kudos to Ed Szurkowski), there were several incidents which raised my hackles then, and make me angry now. One was the issue of "recruiting" and "employment notices." At the conference, President Lou Katz went around to the various bulletin boards placing a notice stating that employment interchanges of any kind were verboten at the meeting. A part of the notice was a planted letter by Ira Fuchs, director of the CUNY computing center. It is the attitude of Mr. Fuchs which I find offensive, and take great exception with President Katz for using his letter to support a decision which was clearly the decision of either the Usenix Board, or the President himself. An executive decision should stand on its own if it is to stand at all. But at any rate, since President Katz chose to use the letter as part of the notice, I feel it important to take issue with the viewpoint of the letter since it was somehow raised to legitimacy.

In the letter, Mr. Fuchs presented the notion that he (and many other managers of "institutional members") would find it very difficult to send employees to meetings with the knowledge they would be exposed to employment activities. Mr. Fuchs claims they send to (sic) people to meetings to exchange information and not finance their job-hunting. But to constrict the topics of conversation at a meeting is hardly within his rights. If Mr. Fuchs is really intent on insuring his personnel are not exposed to those nasty old job-offers, let's examine what it would take to do so.

First, they could not be allowed to attend any conferences. While certain conferences do prohibit blatant recruiting efforts, one juicy topic at any meeting is who is doing what interesting things. I would suggest that in the Unix world, this is the basis of changing jobs (as opposed to SHARE, where almost nothing interesting is happening, anywhere, and money IS the big incentive). I speak from recent experience.

Second, all their mail, both incoming and outgoing would have to be screened for "undesirable influences." Heaven knows what kind of heathens advertise positions in the back of Computerworld. Why, Ford Aerospace and Logicon and Computer Sciences Corporation are ALL looking for Unix personnel!!!

Third, they could not be allowed to read, let alone subscribe to newspapers. All kinds of people are advertising for technical people in newspapers, and New York (the address given on Mr. Fuchs's stationery) papers are probably one of the worst offenders.

Finally, a serious manager must start thinking ahead. In Dallas, one can see Mostek billboards around the city. Just think what might be visible in Silicon Valley. Trips to and from work must be scrutinized for deleterious influences and alternate commuting routes proscribed. The ambitious manager could certainly think of other possible sources of contamination by foreign ideas.

I claim that if this is the only way Mr. Fuchs can keep employees, he has a problem much larger than job notices posted on a bulletin board at a Usenix meeting. I would suggest that most of the Unix people I know would take great pleasure in telling an employer exactly (and graphically) what he could do with his job if it ever became known that was the reason the travel money dried-up at the last minute. I should like to believe that C is still a counter-culture language, and that the people that work around and believe in the Unix world view are basically different from the people that hack Cobol on DOS/VSE. I will be the first to admit that nice salaries are important, but would suggest that the employer's effort to keep the employee happy, interested, and challenged are the real measure of whether the employer really desires the services of an employee. Besides, nothing is more worthless (or possibly more dangerous?) than a programmer doing a job he really does not like.

All this is to advance the view that Mr. Fuchs position is basically untenable, and such a prohibition by Usenix is a pious, Pollyannish attitude. I can certainly agree with "modesty and decorum in all things," and think requests that such activities be low-key and unobtrusive are clearly in order. (Other kinds of efforts would probably be viewed in an "appropriate" light.) The harbor cruises and such which happen around NCC are probably excessive, and would probably be viewed rather humorously by most Unixers. But I don't think it proper to simply decee (sic) it "shall not happen here."

While some of this may seem overstated, in light of conditions in other parts of the world, one should think very seriously about making statements and edicts to the effect of "Thou shalt not <X>." I wonder what excuse his boss used the first time when he told Sharansky he could not go to a meeting.

Sincerely, and thoughtfully,  
Michael D. O'Dell  
(mo@lbl-unix)

US Mail address:  
CSAM - 50B/3234  
Lawrence Berkeley Laboratory  
University of California  
Berkeley, California 94720

Usenix Board Meeting Highlights

The newly elected Usenix Officers assumed office at the Delaware Usenix meeting. The new Board members are:

President	Lou Katz, Columbia University
Vice President	Peter Wiener, Interactive Systems Corporation
Board Member	John Donnelly, National Center for Atmospheric Research
Board Member	Mel Ferentz, Rockefeller University
Board Member	Lew Law, Harvard University
Board Member	Debbie Scherrer, Lawrence Berkeley Laboratory
Board Member	Wally Wedel, The University of Texas

Mel Ferentz was re-elected Treasurer and Ira Fuchs of the City University of New York was elected Secretary of the Association.

New Usenix Membership Class

The Board added a new membership class called a corporate/university-wide membership. Under this class of membership, a corporation or university would have a single institutional vote but would be allowed to distribute tapes to other institutional sites. The membership fee will be the regular corporate or educational rate plus 1/3 of the regular fee for each additional site or campus.

Incorporation

The Board is investigating the question of incorporating the Association. That question will be considered at a meeting of the Board scheduled for October in Boston.

Committees

Several committees were established by the Board to address problems facing the Association. The Board itself will serve as a committee to develop clear statements of purpose and to develop some position statements relative to other groups with overlapping interests such as the proposed DECUS UNIX SIG. A meeting committee was established with John Donnelly as the chair to find meeting sites, develop meeting guidelines, and oversee meeting arrangements. A newsletter committee was established with Wally Wedel as the chair to resolve the problems with regular appearance of the newsletter. A distribution tape committee was established with John Fuchs as the chair to develop guidelines for the submission of material for distribution tapes and provide for collection of materials and development of distribution procedures. A by-laws committee was established with Ira Fuchs as the



chair to provide some much needed cleanup of the Association by-laws.

#### Employment Activities at Association Meetings

The Board discussed the unfortunate chain of events surrounding the ban on recruiting which was announced at the Delaware meeting. The general sentiment was to conduct a poll of institutional members on this issue and to derive a position from poll results.

#### Vendor Relations

The Board discussed the problem of relations between the Association and its vendors. The problem is to develop policies which encourage technical interchange between vendors and customers but avoid problems of too much sales pitch and heavy promotional activities to a captive audience.

#### Meetings

The Board discussed having general Association meetings every 8 to 9 months rather than every 6 months as is happening now. Yearly meetings are too far apart for new installations bringing up UNIX who want to talk to experienced UNIX people. Six month meetings may be too frequent for the presentation of new and exciting work. The Board also suggested shortening meetings from 4 days to 3 days with the possibility of concurrent sessions.

The board recommended that future meetings require abstracts of presentations from speakers before a slot on the agenda is assigned.

Austin, Texas has been approved as a site for the June 1981 meeting. The Board is trying to set up a meeting for January in the Bay Area.

## A Proposal for an Othello Referee

*Geoff Collyer*

105-936 Bute St.  
Vancouver, BC, Canada  
V6E 1Y7

### ABSTRACT

This memo is based upon my Othello program and experience at the June 1979 and June 1980 USENIX conferences.

The most flexible design for Othello (or any symmetric board game) seems to be (see Figure 1):

- referee — a final authority, police-man, record-keeper, set-userid supervisor;
- players — untrustworthy schemers, who may generate their own moves or consult the user to solicit moves;
- display — responsible for showing the progress of the game, as reported by the referee.

All piped communication is by standard ASCII protocols so that any process may be replaced.

As parent, the referee can record CPU times of both players and termination statuses. Display really need not be a child. Referee might record times, final scores and all moves, and player-id's.

### Rationale

The proposed process structure accomodates:

- tournament play: the referee runs two contenders, showing the results on the most convenient device, and recording the result in a file (eg, /usr/othello/games);
- testing: the referee runs two versions (repeatedly), recording results in a file, for evaluation (-s).
- ordinary man-machine play: one player generates moves, the other accepts moves from the user, the referee keeps track (-m).
- man-man play: both players accept moves from a tty.

### Advantages of this process structure

This degree of decoupling allows:

- the referee's output to be tee'd into a file for replay by the display process later;
- any suitable device to be driven by the display back-end;
- other uses of the back-ends (eg, by Chess, Life, Checkers).

Each process is now more robust. The back-ends are useful in their own right(s). Once the referee is proven correct or is deemed to be correct, cheating by *any* player is impossible since the referee will catch attempted cheating (appropriate action: this move is skipped, or automatic loss).

While the entire game evolves, new back-ends for colour TV's can be written while initial work is done on tty's; smarter players can be written and tested mechanically against existing players (humans or otherwise).

For hand-to-hand combat, one can run a player standalone with a physical playing board. This interface is crude, with no checking of moves, and using the protocols directly. It is useful if the referee is ill.

### Implementation

A more realistic process structure is Figure 2.

A word on integrity and interchangability: to guarantee symmetry of players, perhaps the rule-checking subroutine should be a separate process, which also lets us change the game by changing the rule-checker process.

Players are files or pipes to processes. *oc* is the Othello command; usage is

```
oc [red] [black]
```

Examples are:

```
oc script1 script 2 ;; debug referee
oc human mjs | /usr/games/back/vsv01 ;; play mjs's logic
```

### Retrospective

The 'human' player, which accepts a user move in co-ordinates familiar to humans, may be viewed as a front-end to either the referee or another player. For example, in hand-to-hand combat, one might say

```
human | mjs
```

in order to gain familiar co-ordinates when playing sans referee on a physical playing board.

*oc* is thus useful for other games (eg, Chess): by using players and a referee of another game, one may share the back-ends and *oc*'s process initialization. An option might change the game (or maybe just the referee and defaults, since the players are named).

Obviously, *oc* should default for missing arguments and the protocol between the referee and back-end should be intelligible so that

```
oc
```

will play reasonably: red is human; black is a reasonable player; moves are typed on the standard output.

```
cd /usr/games
oc old new | tee slaughter | back/vsv
```

might be used to debug a new player.

```
oc - idiot | back/vsv ;; - means human (or default)
```

allows easy ego trips.

```
oc - /dev/null
```

also makes an easy (and short game).

```
oc human human | vsv
```

lets you whip someone in living colour.

### Notes on Tournament Use

The proposed Othello would have prevented the many problems encountered at the UNIX Othello tournament at the June 1979 and June 1980 conferences.

A referee supplied by an impartial source could have run all players, recording results, showing games in progress, (from a script and) *entirely without human interaction*, thus completing the tournament in minimum time and free of errors in typing, transcribing or converting from program A's co-ordinates to program B's co-ordinates.

The tournament would thus have been pure enjoyment: since the same back-ends would likely have been used on all tty's, a homogenous interface would have been presented to observers. Individual games could have been reviewed; indeed the entire tournament could have been played in half an hour, the winners announced, and interested parties could then have reviewed games of interest to them on available equipment.

### Suggested Back-ends

Nil — hand-to-hand. Basic tty — showing the board. Direct cursor addressing for tty's. Local colour TV interface.

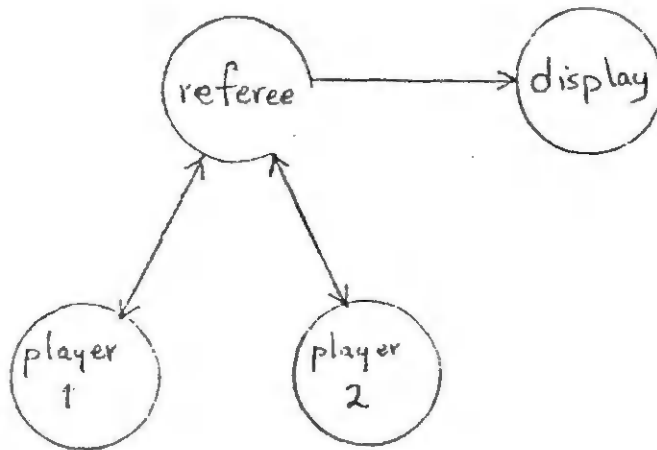


Figure 1

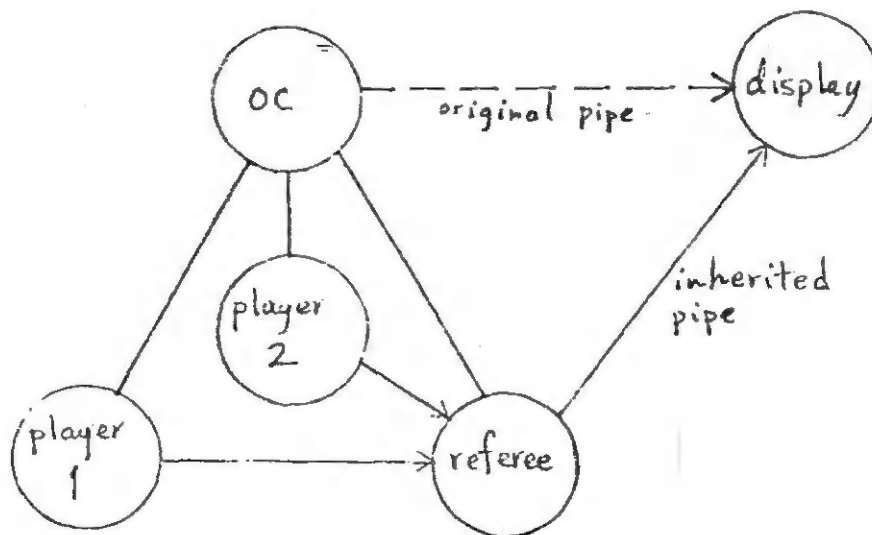


Figure 2

Legend: Circles represent processes.  
Lines with arrows represent pipes.  
Lines without arrows represent forks.